

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

- Q1
1. (currently amended) An image forming apparatus comprising:
- a receiving means for unit receiving an image data of a document;
 - a detecting means for unit detecting a screen angle of a document image based on the image data;
 - a setup means for unit selecting from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and setting up the dither pattern; and
 - a printing means for unit reproducing a quasi-half-tone using the dither pattern set up by said setup means unit.
2. (currently amended) An image forming apparatus according to claim 1, further comprising a reading means for unit reading the image data of the a document to obtain the image data.
3. (currently amended) An image forming apparatus according to claim 1, in which said detecting means unit detects screen angles of document images image data for cyan, magenta and yellow colors, and said setup means unit selects from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and sets up the dither pattern for each color.
4. (currently amended) An image forming apparatus according to claim 3, in which said detection means unit further comprises a color conversion means for unit converting the image data into cyan, magenta, yellow and black image data, a resolution conversion means for unit converting the cyan, magenta, yellow and black image data into high resolution image data, and
- 2b

~~a storage means for unit storing the high resolution image data, wherein screen angles of document images image data for cyan, magenta and yellow color are detected based on the image data stored in said storage means unit.~~

Q1 5. (currently amended) An image forming apparatus according to claim 1, in which said detecting means unit has a plurality of detection patterns to compare the image data with the detection patterns, count counts the numbers of image patterns that match with the detection patterns, and determine determines an angle of a detection pattern that provides a maximum matching counts count as the screen angle of the document image data.

SM 6. (currently amended) An image forming apparatus according to claim 1, in which said detecting means unit extracts an attention pixel from the image data, calculates average densities of peripheral pixels located in a plurality of directions relative to a direction perpendicular to the attention pixel, determines an angle that produces a maximum average density, and elects the determined angle as the screen angle of the document-image data.

7. (currently amended) An image reading apparatus comprising:
a reading means for unit reading an image data of a document;
a detection means for unit detecting a screen angle of a document image based on the image data; and
a setup means for unit selecting from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and setting up the dither pattern.

8. (currently amended) An image reading apparatus according to claim 7, further comprises a data generating means for unit generating a print data in order to reproduce a quasi-half tone using the dither pattern set up by said setup means unit.

9. (currently amended) An image reading apparatus according to claim 7, in which said

~~detecting means unit detects screen angles of document images for cyan, magenta and yellow~~
colors, and said setup ~~means unit~~ selects from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and sets up the dither pattern for each color.

10. (currently amended) An image reading apparatus according to claim 9, in which said detection ~~means unit~~ further comprises a color conversion ~~means for unit~~ converting the image data into cyan, magenta, yellow and black image data, a resolution conversion ~~means for unit~~ converting the cyan, magenta, yellow and black image data into high resolution image data, and a storage ~~means for unit~~ storing the high resolution image data, wherein screen angles of document images for cyan, magenta and yellow color are detected based on the image data stored in said storage ~~means unit~~.

11. (currently amended) An image reading apparatus according to claim 7, in which said detecting ~~means unit~~ has a plurality of detection patterns to compare the image data with the detection patterns, ~~count~~ counts the numbers of image patterns that match with the detection patterns, and determine an angle of a detection pattern that provides a maximum matching ~~counts~~ count as the screen angle of the document image.

12. (currently amended) An image reading apparatus according to claim 7, in which said detecting ~~means unit~~ extracts an attention pixel from the image data, calculates average densities of peripheral pixels located in a plurality of directions relative to a direction perpendicular to the attention pixel, determines an angle that produces a maximum average density, and elects the determined angle as the screen angle of the document image.

13. (currently amended) A printer controller ~~comprises~~ comprising:
a detection ~~means for unit~~ detecting a screen angle of a document image based on an inputted image data of a document inputted;

~~a setup means for unit selecting from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and setting the dither pattern; and~~

a data generating means for unit generating a print data in order to reproduce a quasi-half tone using the dither pattern set up by said setup means unit.

14. (currently amended) A printer controller according to claim 13, in which said detecting means unit detects screen angles of ~~document images~~ image data for cyan, magenta and yellow colors, and said setup means unit selects from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and sets up the dither pattern for each color.

15. (currently amended) A printer controller according to claim 14, in which said detection means unit further comprises a color conversion means for unit converting the image data into cyan, magenta, yellow and black image data, a resolution conversion means for unit converting the cyan, magenta, yellow and black image data into high resolution image data, and a storage means for unit storing the high resolution image data, wherein screen angles of ~~document images~~ the image data for cyan, magenta and yellow color are detected based on the image data stored in said storage means unit.

16. (currently amended) A printer controller according to claim 13, in which said detecting means unit has a plurality of detection patterns to compare the image data with the detection patterns, ~~count~~ counts the numbers of image patterns that match with the detection patterns, and ~~determine~~ determines an angle of a detection pattern that provides a maximum matching ~~counts~~ count as the screen angle of the ~~document~~ image data.

17. (currently amended) A printer controller according to claim 13, in which said detecting means unit extracts an attention pixel from the ~~image data~~ image data, calculates average densities

~~of peripheral pixels located in a plurality of directions relative to a direction perpendicular to the~~
attention pixel, determines an angle that produces a maximum average density, and elects the
determined angle as the screen angle of the ~~document image~~ data.

18 (currently amended). An image forming system comprising:

a receiving apparatus for receiving ~~an image data of a document;~~

a printer controller for detecting a screen angle of a ~~document image based on the image~~
data, selecting from a plurality of dither patterns a dither pattern with a screen angle different
from the detected screen angle and setting the dither pattern; and

a printer for reproducing a quasi-half-tone using the dither pattern set up by said printer
controller.

19 (currently amended). An image forming system according to claim 18, further
comprising a reading apparatus for reading ~~the image data of the a document~~ to obtain the image
data.

20 (currently amended). An image forming system according to claim 18, in which said
printer controller detects screen angles of ~~document images~~ image data for cyan, magenta and
yellow colors, and selects from a plurality of dither patterns a dither pattern with a screen angle
different from the detected screen angle and sets up the dither pattern for each color.

21. (currently amended) An image forming system according to claim 20, in which said
printer controller further comprises a color conversion ~~means for unit~~ converting the image data
into cyan, magenta, yellow and black image data, a resolution conversion ~~means for unit~~
converting the cyan, magenta, yellow and black image data into high resolution image data, and
a storage ~~means for unit~~ storing the high resolution image data, wherein screen angles of
~~document images~~ the image data for cyan, magenta and yellow color are detected based on the

~~Image data stored in said storage means unit.~~

22 (currently amended). An image forming system according to claim 18, in which said printer controller has a plurality of detection patterns to compare the image data with the detection patterns, ~~count~~ counts the numbers of image patterns that match with the detection patterns, and ~~determine~~ determines an angle of a detection pattern that provides a maximum matching ~~counts~~ count as the screen angle of the ~~document~~-image data.

23 (currently amended). An image forming system according to claim 18, in which said printer controller extracts an attention pixel from the image data, calculates average densities of peripheral pixels located in a plurality of directions relative to a direction perpendicular to the attention pixel, determines an angle that produces a maximum average density, and elects the determined angle as the screen angle of the ~~document~~-image data.

24 (currently amended). A record medium for storing a program readable and executable by a computer, said program comprising the steps of:

- (A) receiving ~~an image data of a document~~;
- (B) detecting a screen angle of ~~a document image based on~~ the image data;
- (C) selecting from a plurality of dither patterns a dither pattern with a screen angle different from the detected screen angle and setting the dither pattern; and
- (D) reproducing a quasi-half tone using the setup dither pattern.

25 (currently amended). A record medium according to claim 24, in which said program further comprises the steps of (E) reading a document to obtain the image data ~~of the document~~, and (F) transmitting the read image data.

26. (currently amended) A record medium according to claim 24, in which said step (B) of said program ~~consists of~~ comprises (1) converting the image data ~~into cyan, magenta, yellow~~

~~and black image data, (2) converting said cyan, magenta, yellow and black image data into high resolution image data, (3) storing the high resolution image data, and (4) detecting screen angles of document images image data for cyan, magenta, and yellow colors based on the stored image data.~~

SPB → 27. (currently amended) A record medium according to claim 24, in which said step (B) of said program ~~consists of~~ comprises (1) comparing the image data with a plurality of detection patterns, (2) counting the number of image patterns that match with the detection patterns, (3) selecting a detection pattern that provides a maximum matching counts, and (4) determining an angle of the selected detection pattern as the screen angle of the ~~document-image data~~ data.

Q1 28. (currently amended) A record medium according to claim 24, in which said step (B) of said program ~~consists of~~ comprises (1) extracting an attention pixel from the image data, (2) calculating average densities of peripheral pixels located in a plurality of directions relative to a direction perpendicular to the attention pixel, (3) determining an angle that produces a maximum average density, and (4) electing the determined angle as screen angle of the ~~document-image data~~ data.

29 (New). An image processing apparatus comprising:
a receiving unit receiving image data;
a detecting unit detecting a screen angle of the image data; and
a setup unit selecting, from a plurality of dither patterns, a dither pattern with a screen angle different from the detected screen angle and setting up the dither pattern.